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10/632,858	07/31/2003	Jay S. Gondek	100202320-1	4614

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EXAMINER	
MENBERU, BENIYAM	
ART UNIT	PAPER NUMBER
2625	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/632,858	GONDEK, JAY S.	
	Examiner	Art Unit	
	BENIYAM MENBERU	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 January 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,11-15,21 and 22* is/are rejected.

7)☒ Claim(s) *6-10 and 16-20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Arguments

1. The indicated allowability of claims 1-21 is withdrawn in view of the newly discovered reference(s) to U.S. Patent No. 6310696 to Kumada in view of U.S. Patent No. 6388674 to Ito et al. Rejections based on the newly cited reference(s) follow.

Claim Objections

1. Claim 6 is objected to because of the following informalities: On line 6, "the predetermined the" should be "the predetermined". Appropriate correction is required.

2. Claim 20 is objected to because of the following informalities: On line 6, "to in the" should be "to the".

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 2, 5, 11, 12, 15, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6310696 to Kumada in view of U.S. Patent No. 6388674 to Ito et al.

Regarding claim 1, Kumada '696 discloses a method of gamut mapping to a printer gamut (column 6, lines 20-24), comprising:

receiving a narrow gamut, a wide gamut, a printer gamut for printing on a printer and a predetermined mapping between the narrow and the printer gamuts (Fig. 32 shows monitor, scanner, printer gamuts where in some areas monitor/scanner gamuts are narrower or wider than each other. Column 5, lines 49-67; column 6, lines 20-25; gamut compression is gamut mapping);

identifying overlapping areas in the wide gamut, the narrow gamut and the printer gamut (column 1, lines 18-25; column 6, lines 40-44; The common area defines the overlapping of wide, narrow and printer gamut as shown in Figure 32);
determining when the narrow gamut overlaps one or more areas of the wide gamut (column 1, lines 18-25; column 6, lines 40-44; The common area defines the overlapping of wide, narrow and printer gamut as shown in Figure 32. Further in column 8, lines 15-30, 41-49, gamut checking is used to determine if a color is within gamut of monitor which is equivalent to determining in overlap of gamut data.). However Kumada '696 does not disclose utilizing the narrow gamut values when the determination provides overlapping areas of the narrow gamut and the wide gamut;

selecting a wide gamut interpolation point corresponding to the surface of the printer gamut when narrow gamut areas do not overlap the wide gamut according to the determination; selecting a narrow gamut interpolation point by mapping the narrow gamut to the printer gamut based upon the predetermined mapping when narrow gamut areas do not overlap the wide gamut according to the determination; and interpolating the narrow gamut interpolation point and the wide gamut interpolation point to expand tile narrow gamut values into the printer gamut.

Ito et al '674 discloses utilizing the narrow gamut values when the determination provides overlapping areas of the narrow gamut and the wide gamut (Figure 16, shows a narrow input gamut and wider output gamut; When in the overlapping area AR1 between input and output gamut, the output gamut data is equivalent to input gamut data (column 9, lines 12-15; column 10, lines 3-6)); selecting a wide gamut interpolation point corresponding to the surface of the printer gamut when narrow gamut areas do not overlap the wide gamut according to the determination (column 10, lines 7-20; As shown in Figure 16, when in the area AR2 which has some points not overlapping between input (narrow) and output (wide) gamut, the output value (L*_out) is based on wide gamut point L*_p on the surface of output (wide) gamut.); selecting a narrow gamut interpolation point by mapping the narrow gamut to the printer gamut based upon the predetermined mapping when narrow gamut areas do not overlap the wide gamut according to the determination (column 9, lines 64-68; L*_in defines the narrow gamut mapped point); and interpolating the narrow gamut interpolation point and the wide gamut interpolation point to expand the narrow gamut values into the printer gamut (column 10, lines 7-54; L*_out defines the interpolated value based on L*_tmp and L*_p and L*_m values which is expansion of L*_in data.).

Having the system of ***Kumada '696*** and then given the well-established teaching of ***Ito et al '674***, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the system of ***Kumada '696*** as taught by ***Ito et al '674***, since ***Ito et al '674*** stated in col. 4, Lines 34-43, such a modification would provide gamut mapping for wider output devices.

Regarding claim 2, Kumada '696 in view of Ito et al '674 teaches all the limitations of claim 1. Further Kumada '696 discloses the method of claim 1 wherein a portion of the wide gamut is wider than the printer gamut and a portion of the printer gamut is wider than the narrow gamut (As shown in Figure 32, the monitor gamut (wide) is wider than the printer gamut close to the G region of the triangle. Portion or printer gamut on the left side between G' and B' is wider than the scanner (narrow) gamut.).

Regarding claim 5, Kumada '696 in view of Ito et al '674 teaches all the limitations of claim 1. Further Ito et al '674 discloses the method of claim 1 wherein identifying overlapping areas further includes, mapping the area covered by the narrow gamut, the wide gamut and the printer gamut in a reference color space selected from a set including CIELAB color space and LCH colorspace (column 9, lines 64-67).

Regarding claim 11, see rejection of claim 1 as shown above. Further Kumada '696 discloses a processor and a memory for executing instructions and containing instructions for gamut mapping respectively (column 5, lines 27-41).

Regarding claim 12, see rejection of claim 2 as shown above.

Regarding claim 15, see rejection of claim 5 as shown above.

Regarding claim 21, see rejection of claim 1 as shown above.

Regarding claim 22, see rejection of claim 1 as shown above.

3. Claims 3, 4, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6310696 to Kumada in view of U.S. Patent No. 6388674 to Ito et al further in view of U.S. Patent No. 7233694 to Fukui.

Regarding claim 3, Kumada '696 in view of Ito et al '674 teaches all the limitations of claim 1. However Kumada '696 in view of Ito et al '674 does not disclose the method claim 1 wherein the wide gamut is selected from a set of wide gamuts including: CIELAB, YCC, Adobe RGB, bgRGB, scRGB, e-sRGB and ROMM.

Fukui '694 discloses wherein the wide gamut is selected from a set of wide gamuts including: CIELAB, YCC, Adobe RGB, bgRGB, scRGB, e-sRGB and ROMM (column 8, lines 17-24, 40-45).

Having the system of ***Kumada '696 in view of Ito et al '674*** and then given the well-established teaching of ***Fukui '694***, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the system of ***Kumada '696 in view of Ito et al '674*** as taught by ***Fukui '694***, since ***Fukui '694*** stated in col. 8, lines 40-45, such a modification would provide wide gamut which reduces out of gamut colors.

Regarding claim 4, Kumada '696 in view of Ito et al '674 teaches all the limitations of claim 1. Further Fukui '694 discloses the method of claim 1 wherein the narrow gamut includes an sRGB compatible gamut (Figure 3, srgb is narrow gamut (column 6, lines 32-41).

Regarding claim 13, see rejection of claim 3 as shown above.

Regarding claim 14, see rejection of claim 4 as shown above.

Allowable Subject Matter

4. Claims 6-10 and 16-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other Prior Art Cited

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5416890 to Beretta disclose gamut clipping.

U.S. Patent No. 6437792 to Ito et al discloses gamut processing.

U.S. Patent No. 6724507 to Ikegami et al discloses gamut compression.

U.S. Patent Application Publication No. US2002/0159081 A1 to Zeng discloses color processing system.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BENIYAM MENBERU whose telephone number is (571) 272-7465. The examiner can normally be reached on 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on (571) 272-7437. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is (571) 272-2600. The group receptionist number for TC 2600 is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner
Beniyam Menberu

/Beniyam Menberu/
Examiner, Art Unit 2625

04/11/2008

/Mark K Zimmerman/

Supervisory Patent Examiner, Art Unit 2625